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- Portables help sales reps excel
- 19.2 modems rev up
- DCA's shrewd deals
- Making SQL easy
- Can OA still save $?

COMPUTER DECISIONS®
THE MAGAZINE FOR MIS EXECUTIVES
A HAYDEN PUBLICATION

BEYOND STRATEGIC SYSTEMS

Fortune 100 MIS executives' big challenge is building information systems that reach consumers.

It won't be easy.

James Johnson, chief MIS strategist at Equitable Life, foretold the failure of early videotex services, but made sure the carrier's investment in them paid off.

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Cover photo by Ted Hardin

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New chip to soup up micros and minis ... Motorola's new 32-bit 68030 microprocessor, at least twice as powerful as its current 68020 chip, will give performance boosts to users of micros and minis based on Motorola chips. Motorola claims its new chip, which is scheduled for release in mid-1987, is two to four times faster than the new Intel 80386 processor.

The increased performance comes from an on-chip memory management unit and an on-chip data cache added to the 68020's existing instruction cache, as well as a reduction in external access time from three clock cycles to two cycles. With its 20-MHz design, the 68030 will operate at 16 MHz to 30 MHz. □

The "800" club grows ... With MCI Communications Corp.'s announcement of MCI 800 Service, AT&T is no longer the only carrier boasting a toll-free "800" offering. Analysts say other independent carriers are likely to follow MCI's lead in challenging AT&T.

The new MCI 800 Service, scheduled to be available in the first quarter of next year, will be 10 percent to 12 percent cheaper than AT&T's comparable offerings, MCI claims. No tariffs were filed at press time, however.

MCI says it will offer several new features in its service, including flat-rate distance-sensitive pricing, the option to use the same number for in-state and out-of-state callers at no additional charge, volume discounts, call detailing, and dedicated or switched customer connections. □

ADR recognizes DB2 ... In announcing a new strategic direction for its database products, Applied Data Research Inc. (Princeton, NJ) has acknowledged both the emergence of IBM's SQL as the standard data manipulation language and the importance of DB2, IBM's relational database management system.

ADR plans to equip Ideal, its fourth-generation language, with the ability to generate SQL statements that act on DB2. This facility will allow programs written in Ideal to run on DB2 as they would on ADR's own DBMS, Datacom/DB, ADR says. Future versions of other ADR development tools, including Dataquery for ad hoc queries and ADR DL/Cobol, will be able to access DB2, the vendor says. Tangible results of the strategy, revealed at ADR's annual user group meeting, are not expected until the third quarter of next year.

ADR also says it is working toward the next step in SQL support: allowing SQL statements to access Datacom/DB. The vendor did not announce a target date for such a capability, however. □

Who's out first? ... Although Oracle Corp. announced its SQL Star distributed relational database system after archrival Relational Technology Inc. announced its product, Oracle claims it is the first vendor to ship such a product.

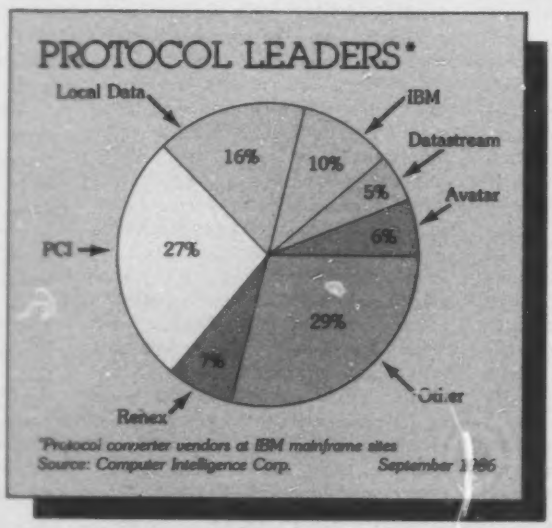
Many features of both vendors' products are still unavailable, however. A fully functional version of the DBMS that Oracle is now shipping will not be available until the third quarter of next year. Relational Technology promises a complete distributed DBMS by 1988.

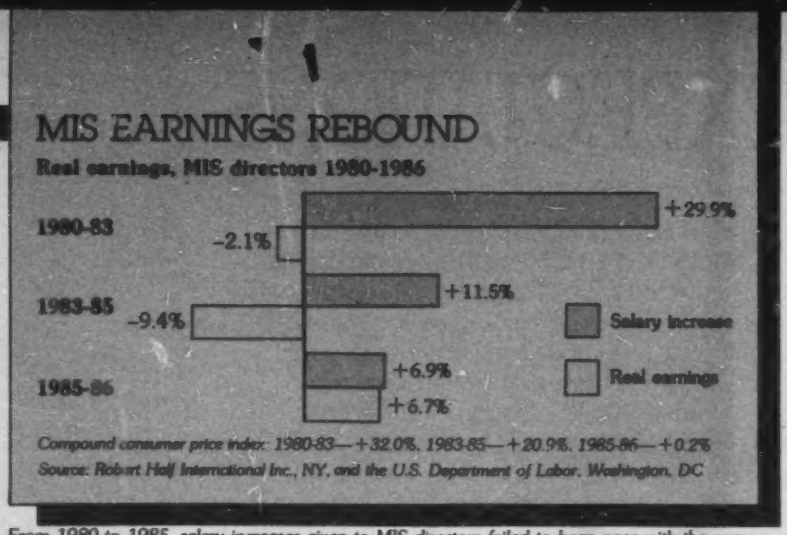
Lawrence J. Ellison, president of Belmont, CA-based Oracle, claims SQL Star is based on IBM's as yet unreleased distributed DBMS, called R Star. SQL Star features the same syntax and uses the same extensions to SQL that IBM has revealed in technical papers about R Star, Ellison says.

The elements of SQL Star available right now are Version 5.1 of Oracle (free to Oracle users), which provides for multisite queries and distributed directory services, and SQL-Net, which interfaces to networks and provides distributed processing between applications and databases.

Currently, SQL Star users can seamlessly access information from a remote Oracle DBMS and process it at their local hosts. Oracle says that connections to IBM's SQL/DS, DB2, and IMS DBMSs are forthcoming. Also still to come are the abilities to update transactions across the network, replicate data in different databases, and support a single table of data over multiple sites.

Oracle estimates that the components of SQL Star will cost from 25 percent to 50 percent of the basic Oracle licensing fee, which ranges from $1,000 for a micro to $160,000 for a forthcoming version that runs on IBM mainframes under the MVS operating system. □





From 1980 to 1985, salary increases given to MIS directors failed to keep pace with the compounded Consumer Price Index, so their real earnings actually fell. The increases caught up in 1986.

the more important aspect from our point of view," says Ed Scharmer, IBM's 3174 product manager. "We're well aware of customer demands for a single terminal to talk to IBM hosts that can also talk to what is often referred to as departmental computers, especially in engineering applications." Moreover, integrating the 3174 in engineering and manufacturing applications will be made easier by the inclusion of a controller interface that allows third-party devices, such as robots or process controllers, to be plugged in. The request for 3274 to ASCII conversion was made by Share, an IBM user group.

This array of features may cause some users to choose the 3174's protocol conversion option over terminal emulation. "It definitely puts a lot of pressure on vendors who were filling that niche before," says Bob Silverstein, a consultant with Network Strategies Inc., Fairfax, VA.

Connecting to non-Blue hosts. IBM already markets several conversion devices, including the 7171 and the 3708. But the key advantage of the 3174 is its ability to integrate this capability into the controller.

Westinghouse Corp.'s marine division in Sunnyvale, CA, which makes submarine gears and related components, is considering the purchase of a 3174 when the protocol conversion option becomes available in the first three months of next year. Westinghouse plans to use the controller to connect 50 to 60 terminals and personal computers to both a Hewlett-Packard 3000 minicomputer running manufacturing applications and an IBM mainframe that runs finance, human resource, and office automation applications. Connection to both hosts is more important than the higher performance provided by terminal emulation boards, says Rob Realini, the division's manager of technology support.

Because of the additional functions available with the 3174, such as the ability to connect to IBM's token-ring network, the division will look closely at the product, says Realini, although some models of the 3174 can't support the token-ring and protocol conversion options simultaneously. The division's IBM representative also indicated that an Ethernet hookup for the device may be forthcoming, although it's still unannounced.

Terminal emulation still strong. Despite these features, the asynchronous adapter for the 3174 won't make the Irma board from Digital Communications Associates Inc. (DCA, Alpharetta, GA) and other terminal emulation products obsolete. For applications such as file transfers that require the Mbit-per-second speeds available over coaxial cabling, terminal emulation products will still be the first choice. If coaxial cabling is already in place, terminal emulation cards will remain the preferable option, says Don Czubek, of Communications Solutions Inc., a software and consulting firm based in San Jose, CA. "But, if all you're interested in is a plain vanilla 3270, then Irmas and the 3174's protocol conversion option are pretty much comparable," says Czubek.

According to one terminal emulation board maker, the pricing and functionality of the 3174 is less attractive than terminal emulation. Each asynchronous emulation module, consisting of software and port adapters serving up to eight micros or ASCII terminals, costs $2,250. Also needed are a second 3174 disk drive ($650) and an asynchronous adapter card for the micro (about $100). If the micro or ASCII terminal is more than 50 feet from the controller, a modem is also required. A 3174 can handle up to three adapters serving up to 24 micros.

DCA officials say that to fully configure a 3174 for the conversion costs more than just the basic software modules. "If you want to buy a full-blown 3174, there's a lot more there than meets the eye," says Jim Ottinger, president of DCA's personal computer communications group. He adds that the $1,195 price for an Irma board is often discounted to as low as $750. "You're not going to get that kind of discounting with IBM," he says.

Ottinger believes that existing customers of DCA's product line will be reluctant to make the switch because the Irma boards have achieved the status of a de facto standard in the marketplace. "To switch means to retrain users and put in new software," he says. The marketplace has deemed protocol conversion less practical than terminal emulation, DCA claims. "If it were as functional, protocol conversion—IBM's and others—would be a much larger business," says Bill Hiller, DCA's director of product marketing.

The Irma board converts the IBM PC into a 3270-type terminal, while protocol conversion takes asynchronous data transmitted from the micro or terminal and converts them to a synchronous or bisynchronous data stream. Because asynchronous communication methods proceed on a character-by-character basis, they are inherently slower than the synchronous communications methods used by 3270-type terminals, which transfer data as blocks of information. In addition, protocol conversion doesn't supply the same terminal-handling capabilities as terminal emulation does, Hiller says. "If you want to sign on once a week to look at just one piece of data, or if you have a bunch of asynchronous terminals, such as DEC VT-100s, then protocol conversion is fine," he says. "But if you're transmitting volumes of graphics data, you wouldn't be able to transmit it at asynchronous speeds." Ilene Goldman, an analyst with International Data Corp., Framingham, MA, agrees. "You can make the case that protocol conversion is a cheaper solution, but it's a cheaper solution that gives you less in terms of micro-to-mainframe links."

IBM's Scharmer agrees that terminal emulation is a better choice when high data-transfer rates are required. "A protocol converter goes through another level of function as opposed to going directly to the heart of the 3174, as 3270-type display devices do," he says.

Given the proper configuration, the speed problem with protocol conversion disappears. For instance, Monsanto Chemical Co., St. Louis, uses IBM's 7171 protocol converter, which is channel-attached to an IBM mainframe. "Compared with Irma cards, file transfer is comparable if not a little faster through the 7171," says John Sivill, a Monsanto technology analyst. Monsanto also uses the DCA product for micro-to-mainframe access at its St. Louis headquarters. But using protocol conversion, in conjunction with the 7171 and a local-area network, provides connections to a wide range of